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Sent: Fri 1/10/2014 2:50:46 PM
Subject: FW: [WQ News] Water Worries Lead Homeowners to Fault EPA Use of Driller Data

FYI

From: wq-news@googlegroups.com [mailto:wq-news@googlegroups.com] **On Behalf Of** Loretta Lohman
Sent: Friday, January 10, 2014 7:40 AM
To: wq-news@googlegroups.com
Subject: [WQ News] Water Worries Lead Homeowners to Fault EPA Use of Driller Data

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Water Worries Lead Homeowners to Fault EPA Use of Driller Data

By Mark Drajem January 10, 2014

When the U.S. Environmental Protection Agency declared that a group of Texas homes near a gas-drilling operation didn't have dangerous levels of methane in their water, it relied on tests conducted by the driller itself.

Now, independent tests from Duke University researchers have found potentially explosive levels of methane in some of the wells, and homeowners want the EPA to re-open the case.

The previously undisclosed Duke testing illustrate the complaints of critics who say the agency is reluctant to sanction a booming industry that has pushed down energy prices for consumers, created thousands of jobs and buoyed the economy.

"I don't understand why they would let the company that was accused of doing the wrongdoing conduct the tests," said Shelly Perdue, who lives near the two wells in Weatherford, 60 miles (97 kilometers) west of Dallas. "It doesn't make sense."

The driller, Range Resources Corp. (RRC:US), denies that its drilling in the area is the source of any contamination and says its testing was conducted by an independent laboratory.

"Range used state and federally approved testing methodologies that are internationally recognized and those results have found historically consistent water quality," Matt Pitzarella, a spokesman for the Fort Worth, Texas-based company, said in an e-mail. "Range's operations did not cause or contribute to the long-standing and well-documented matter of naturally occurring methane."

Closely Watched

The EPA says states have the primary responsibility to keep drinking water safe. It agreed to let the driller test the water -- something the agency says is not uncommon -- as part of a settlement of a case the EPA brought in 2010 on behalf of homeowners.

The agency will meet with state regulators next week to discuss the complaints, though it doesn't intend to conduct it's own tests, said David Bloomgren, an EPA spokesman.

The process used by Range is called hydraulic fracturing, also known as fracking, that involves shooting water, sand and chemicals underground to break apart rock and free trapped gas. It has spurred a boom in U.S. natural gas production in the Barnett Shale of Texas and other places.

The Weatherford case is one of only three in which the EPA has preliminarily linked water woes to hydraulic fracturing. In Pavillion, Wyoming, an EPA investigation tied fracking to chemicals found in test wells. In Dimock, Pennsylvania, the agency stepped in to provide water to homeowners who said fracking tainted their wells.

'Imminent Danger'

When the EPA first got involved in the Pavillion and Dimock cases, it did the water testing itself. Last June the EPA bowed out of the Pavillion investigation and left the Wyoming state government in charge. In the Dimock case, EPA's own tests found the water there safe, and the agency dropped the case.

In 2010 the EPA did its own testing in Weatherford and found dangerous levels of methane it termed "an imminent and substantial endangerment" to homeowners. It issued a notice of

violation and sued Range soon after. Two years later, the agency settled with an agreement that called for Range to conduct four sets of tests of 20 wells in the area. The results showed minimal levels of methane, except in one well that has been disconnected by the homeowner due to the high gas levels, according to a report by the EPA's Office of Inspector General released Dec. 24.

The report, requested by a lawmaker who suspected the agency had treated Range too harshly, supported the agency's original 2010 findings against the driller and questioned the quality and utility of Range's follow-up tests.

Methane Levels

The inspector general identified "questions" about Range's testing, including that "EPA did not review or approve Range Resources' sampling protocol, nor did it review or approve the data collection and analytical methods during the course of the study," the report said.

Meanwhile, scientists from Duke have found high levels of methane in area wells. Duke provided its data to homeowners and some of the results were passed along to regulators at the EPA and the state.

The results from Duke show the water from many homes exceeds the level of 10 milligrams per liter that the U.S. Geological Survey has set as a minimum safety level, a finding at odds with the results from Range.

The Texas Railroad Commission, which regulates oil and gas drilling in the state, reached the same finding in 2011. Residents appealed to the panel last year after receiving the results from Duke and other independent researchers, and the commission opened a new investigation, said Ramona Nye, a spokeswoman.

EPA Meeting

The EPA will review the railroad commission's findings in next week's meeting, said Bloomgren, the agency spokesman. The Safe Drinking Water Act assigns to states the primary responsibility for water quality.

Steve Lipsky, another homeowner, said he's trying to get the EPA to re-test the water and force Range to permanently close its wells with cement. He sued Range, which countersued alleging defamation and business disparagement.

"EPA is our best hope," Lipsky said in an interview. Unless measures are taken, "something catastrophic is going to happen"

A team of researchers led by Rob Jackson, an environmental sciences professor at Duke, have been taking samples from homeowners' wells and performing the isotopic analysis to try to determine whether the gas found in well samples is the same as the gas from the Barnett shale,

where Range is producing.

National Study

Duke is a leader in research on the environmental impact of fracking and maintains a database of water tests from hundreds of wells around the country. Its Weatherford testing, funded by the National Science Foundation and Duke, is part of a series of studies it is conducting to try to determine if fracking is polluting water.

Jackson and his colleagues are writing a paper about whether the gas drilling is to blame for the methane in the wells, and he declined to discuss those findings before they are reviewed by peers and published. They have, however, provided the raw data to homeowners that show methane levels much higher than federal guidelines or those found by Range.

"It's fair to say that based on our sampling there's enough to go on and continue sampling there," Jackson said in an interview. The Duke data, which were provided to Bloomberg by the homeowners, hasn't been previously reported.

"The fact that we've been there a year tells you something," he said.

Result Discrepancies

Homeowner Perdue's case illustrates the discrepancies in the results. Range's consultants found 4.2 milligrams per liter of methane in her water in a test taken in mid 2012, and 20 milligrams in November 2012. Duke's tests a month later found a value of 54.7.

Perdue said technicians for Range collected samples differently than those for Duke -- taking it from a vented holding tank in one instance -- and didn't capture all the dissolved gas found in the well.

Separate from questions about the amount of gas present is what caused it to appear. Range says the gas is naturally occurring, and the state so far has agreed.

A consultant hired by the EPA as part of its initial investigation in 2010 concluded that the gas was chemically identical to that being extracted by Range. The consultant, Geoffrey Thyne, analyzed the isotopes of the gas in Lipsky's wells and the gas from Range's production wells, and found them to be a match.

Thyne, who was criticized by the gas industry for his findings, said he's now doing follow-up analysis to see whether those initial results hold up.

"I've seen no data that makes me want to change my original opinion," Thyne said in an interview.

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